



ENVIRONMENTAL SERVICES



**Customized solutions
built just for you.**



MARINE PROFESSIONALS SINCE 1919

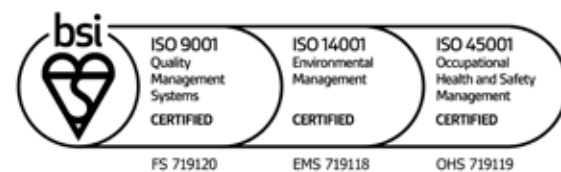
J.F. Brennan Company, Inc. (Brennan) is a fourth-generation, family-owned environmental remediation and marine construction firm operating throughout the United States. Over the past 100+ years, our high-quality work and transparent communication with clients have made us a preferred contractor for the U.S. Environmental Protection Agency, U.S. Army Corps of Engineers, and private owners of water-based infrastructure.

SAFETY FIRST

Safety is at the forefront of every task we do and every decision we make. Our crews are provided with the right training, the right equipment, and proper support to do their jobs. From our safety-based observation program to our culture of empowerment, we identify risks and take the required steps to mitigate those risks as we execute our work. Brennan is certified to the ISO 45001 standard (Occupational Health and Safety Management).

QUALITY

We take pride in delivering the highest quality work. Our Total Quality Management (TQM) program ensures we consistently meet and exceed your expectations. Ethically, and for the benefit of our employees, clients, and communities, we operate our business to comply with regulatory requirements. We are certified to the ISO 9001 and ISO 14001 standards (Quality Management and Environmental Management, respectively).



PEOPLE

Our organizational culture sets us apart. We prioritize safety, quality, and efficiency, and we make our company the best possible place to work for all our employees. Our culture is rooted in everything we do, centered around open communication, respect, and accountability. It is how we execute work for our clients with the highest levels of integrity, transparency, and professionalism.



OUR SERVICES

At Brennan, our environmental remediation and restoration services are uniquely customized for each and every project. Our experienced marine professionals—outfitted with a fleet of specialty equipment—have successfully completed some of the largest and most challenging remedial projects.

OUR ENVIRONMENTAL CAPABILITIES

- » Environmental Dredging
- » Dewatering and Material Separation
- » Water Treatment
- » Treatability Testing
- » Environmental Capping
- » Hydrographic Survey and Underwater Inspections
- » Climate Change Resilience
- » Wetland and Habitat Restoration
- » Marine and Remedial Construction





ENVIRONMENTAL DREDGING

DECADES OF EXPERIENCE

We began dredging over 70 years ago. Through the intervening decades, we created and grew an **experienced workforce** of marine professionals.

THE BEST EQUIPMENT

At Brennan, we do not settle for conventional equipment. We work closely with original equipment manufacturers (OEM) to engineer **highly customized dredges** that maximize **efficiency and accuracy**.

AREAS OF FOCUS

- » Coastal resiliency
- » Impacted sediment remediation
- » Lagoons and industrial wastewater ponds
- » Lake reclamation
- » Wetland restoration

MORE DREDGING TECHNOLOGIES THAN ANY OTHER CONTRACTOR

HYDRAULIC DREDGING

Our swinging-ladder hydraulic dredges range from 6 to 16 IN discharge diameter. Brennan has **pumped slurry more than 10 MI** through high-density polyethylene (HDPE) pipeline. We dredge into varying types of separation and dewatering equipment as well as open disposal sites.



MECHANICAL DREDGING

Our mechanical dredging expertise extends beyond traditional methods. We offer an array of proprietary options for use with **duty-cycle cranes and long-reach excavators** to provide a solution for any digging condition.



Of all the companies that I have worked with, Brennan has by far been the most professional, organized, and invested company to do work for the district.

”

Andy Henschel
Shell Rock River
Watershed District



DIVER-ASSISTED MICRO-DREDGING

Working around critical structures, ordnances, or confined spaces? Brennan has **100+ Association of Diving Contractors International (ADCI)-certified commercial divers on staff** who can remove debris and contaminated sediments in areas where attention to detail is critical.

AMPHIBIOUS DREDGING

Our equipment safely navigates where barges can't float, and where ground equipment can't trek. Brennan's specialty amphibious trucks **can float fully loaded** with a 20 CY payload or be configured to support geotechnical drilling equipment.



IF THE TOOL DOESN'T EXIST, WE INVENT IT.

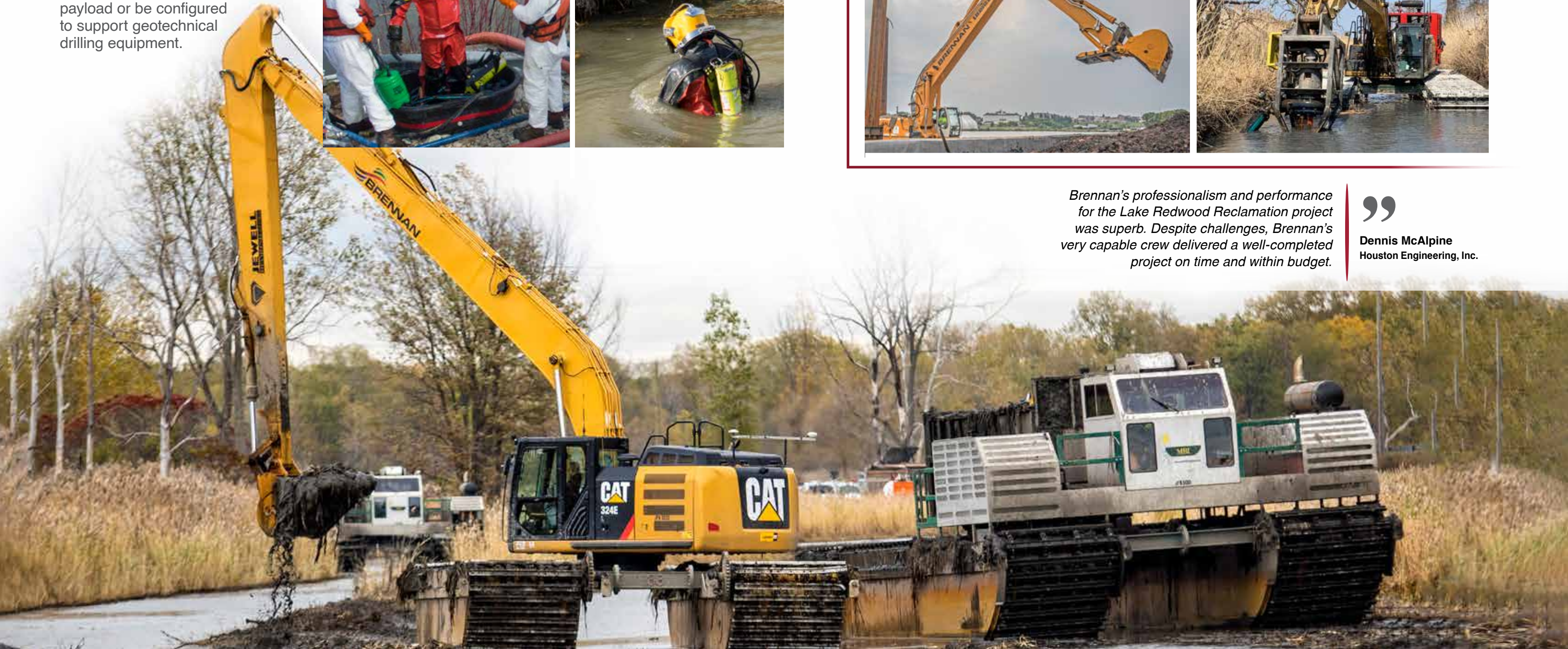
Our marine professionals constantly seek ways to make our projects **safer, more efficient, and more cost-effective**. With an arsenal of tools and dredge attachments that includes our patented VicVac™, Brennan has redefined industry standards for removing debris and residuals.



Brennan's professionalism and performance for the Lake Redwood Reclamation project was superb. Despite challenges, Brennan's very capable crew delivered a well-completed project on time and within budget.

”

Dennis McAlpine
Houston Engineering, Inc.





DEWATERING AND MATERIAL SEPARATION

A project's success depends on effectively integrating dredging and dewatering systems. At Brennan, we design and implement **fully integrated solutions** for every project.



INFRASTRUCTURE
ALTERNATIVES, INC.

Brennan doubled down on our dewatering capabilities when we acquired the Dredging & Dewatering division of Infrastructure Alternatives, Inc. (IAI). Starting with bench-scale testing through full-scale implementation, we handle the whole operation from proposal to disposal.



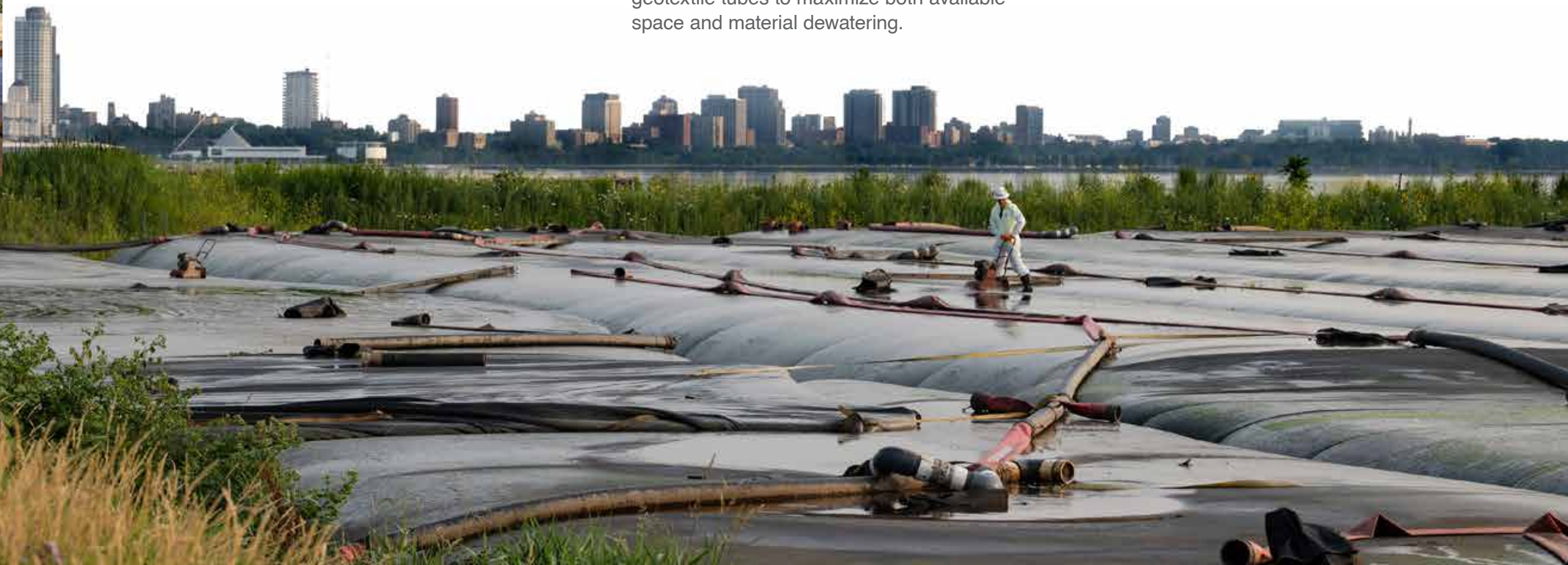
PASSIVE (YET RAPID) DEWATERING

GEOTEXTILE TUBES

We have successfully **dewatered more linear feet of geotextile tubes** than any contractor in the United States. Whether working on a small, temporary dewatering pad or a large, long-term cap-in-place landfill or disposal facility, our experts fill and stack geotextile tubes to maximize both available space and material dewatering.

CONTAINMENT FACILITIES

Brennan constructs and operates confined disposal facilities with **structural integrity and operating capacity** to withstand dynamic slurry discharge. We are experts in creating and utilizing weir structures that meet targeted effluent quality.



Dive into more information on our dewatering capabilities.



MECHANICAL DEWATERING

Depending on the project, dewatering equipment can be mobile-skid- or trailer-mounted, semi-permanent, or permanent installations. We **systematically determine and implement** the most suitable high-speed dewatering method for each project.



MATERIAL SEPARATION

Dredge slurry is filled with debris, sticks, rocks, and vegetation. We use a wide range of equipment options to **mitigate risks** associated with debris management and material separation.



OUR MECHANICAL SEPARATION AND DEWATERING METHODS

- » Belt presses
- » Filter presses
- » High-speed shaker tables
- » Hydrocyclones
- » DEL's patented Total Clean System
- » Sand wheels
- » Trommel screens
- » Thickener units



Ashely Binion-Zuccaro
U.S. Army Corps of Engineers,
Buffalo District

Brennan's professionalism and flexibility exceeded my expectations on the Otter Creek Cleanup project. Their ability to stay ahead of schedule and proactively manage the project made my job as the PM easy.



WATER TREATMENT

EXPERIENCE THE BRENNAN DIFFERENCE

Brennan's large inventory of portable water treatment equipment enables us to **right-size a solution for every project**. We design, assemble, and operate systems with the capacity and redundancy required to maximize production rates and discharge quality. Our experienced, licensed operators continuously monitor and use the best treatment techniques to ensure we maintain the most stringent water quality standards.

OUR INVENTORY OF EQUIPMENT INCLUDES

- » Bag filters
- » Granular activated carbon (GAC)
- » Inclined plate clarifiers
- » Mix, settling, and storage tanks
- » Multimedia filters
- » Oil water separators
- » Polymer systems



CONTAMINANTS OF CONCERN WE TREAT

- » Benzene, toluene, ethylbenzene, and xylene (BTEX)
- » Heavy metals, such as mercury
- » Oil and grease
- » Per- and polyfluoroalkyl substances (PFAS)
- » Polychlorinated biphenyls (PCBs)
- » Polyaromatic hydrocarbons (PAHs)
- » Semi-volatile organic compounds (SVOCs)
- » Total suspended solids (TSS) and turbidity
- » Volatile organic compounds (VOCs)
- » And more



Brennan was very accommodating to all stakeholders involved in the project including, but not limited to, local municipalities, client, engineer, and regulatory agencies. Brennan deliverables were very well put together which made working with Brennan from the engineer's perspective much easier.

”

Robert Woodruff
Ramboll, Inc.



TREATABILITY TESTING

At our treatability laboratory in Rockford, MI, we apply traditional wastewater testing techniques in new and innovative ways to optimize **chemical and mechanical treatment processes**. Using the data our experienced chemists acquire, we implement the most cost-effective, full-scale solution for your remediation project.

COMPREHENSIVE LAB STUDIES TO OPTIMIZE EFFECTIVENESS

- » Chemical flocculant, coagulant, and polymer optimization
- » Soil amendment trials
- » Geotextile tube dewatering tests (GTDT)
- » Paint filter and compressive strength analysis
- » Turbidity and total suspended solids (TSS)
- » Mechanical dewatering and processing trials
- » Rapid dewatering tests (RDT)
- » Wastewater treatability study

Brennan's crew demonstrated the ability to make rapid adjustments when conditions warranted and did an exceptional job of communicating throughout the project. I would not hesitate to use their services when presented with a future opportunity.

”

Jim Brown
Central Nebraska
Public Power and
Irrigation District





ENVIRONMENTAL CAPPING

Brennan has successfully capped several thousand subaqueous acres, more than any other contractor in the United States. With our **industry-leading experience and specialized equipment**, we create a restorative layer isolating contaminants while reestablishing a clean aquatic ecosystem.

OUR ENGINEERED CAPPING EXPERIENCE INCLUDES

- » AquaGate®+ and AquaBlok®
- » Granular activated carbon (GAC)
- » Organoclay®
- » Powdered activated carbon (PAC)
- » Sand covers



NO ONE PROVIDES MORE ARMORING OPTIONS THAN BRENNAN

- » Geocomposite mats
- » Grout-filled, cast-in-place articulating block mats
- » Marine mattresses
- » Precast articulating block mats
- » Reactive core mats
- » Riprap and stone placement

The Grasse River project was the largest and most challenging project... Brennan was able to complete the work meeting all definitions of success —completing the work as designed, meeting all specifications, completing the work on schedule and on-budget.



Kirk Gribben
Arconic, Inc.





OUR REVOLUTIONARY BROADCAST CAPPING SYSTEM

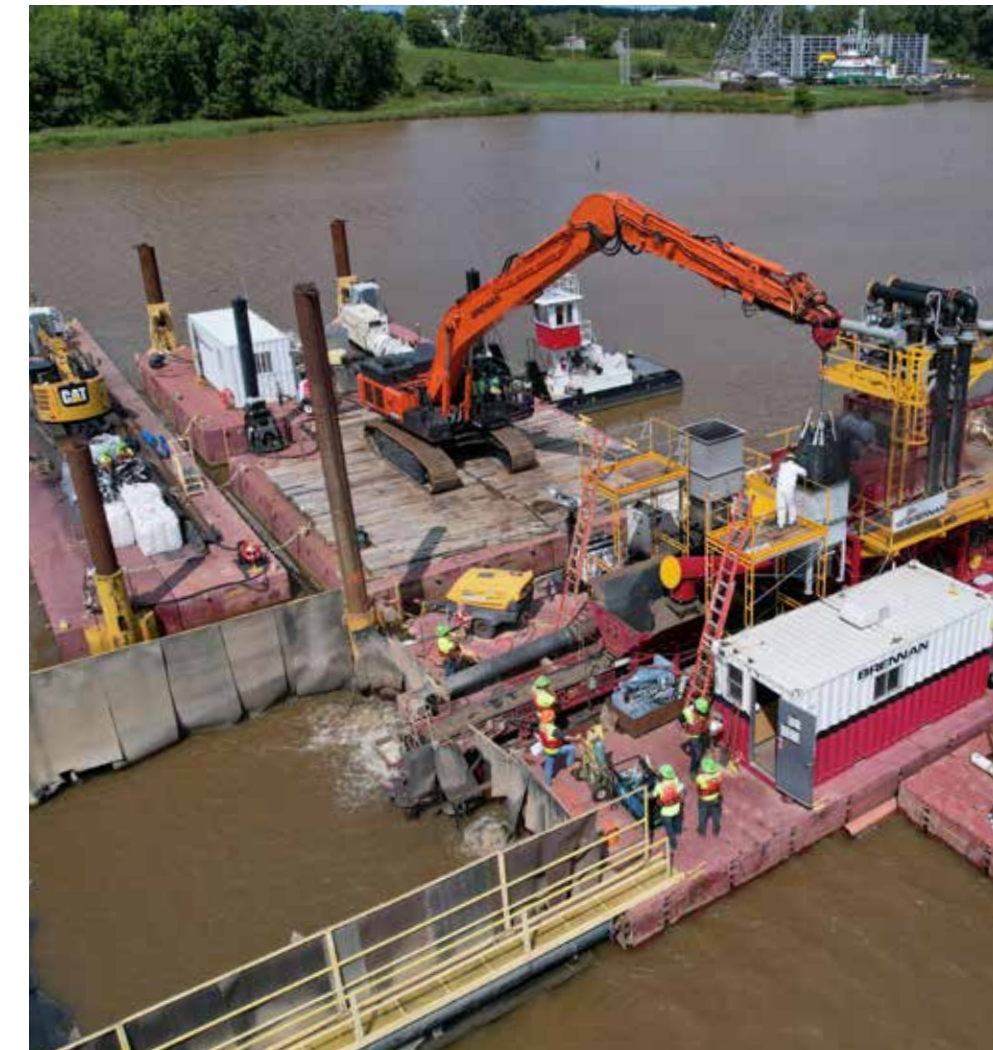
Brennan's patented Broadcast Capping System (BCS™) has proven to maintain **precise tolerances while maximizing production rates**. It nearly eliminates any intermixing with residual impacted sediments by using the water column to slow down each particle so it lands lightly on the bottom.



CAPPING WITH POWDERED ACTIVATED CARBON

Our integrated Brennan On-Site System (iBOSS™) combines the BCS and Brennan's proprietary delivery agent (BPDA) to create **the only proven capping system** that successfully places powdered activated carbon.

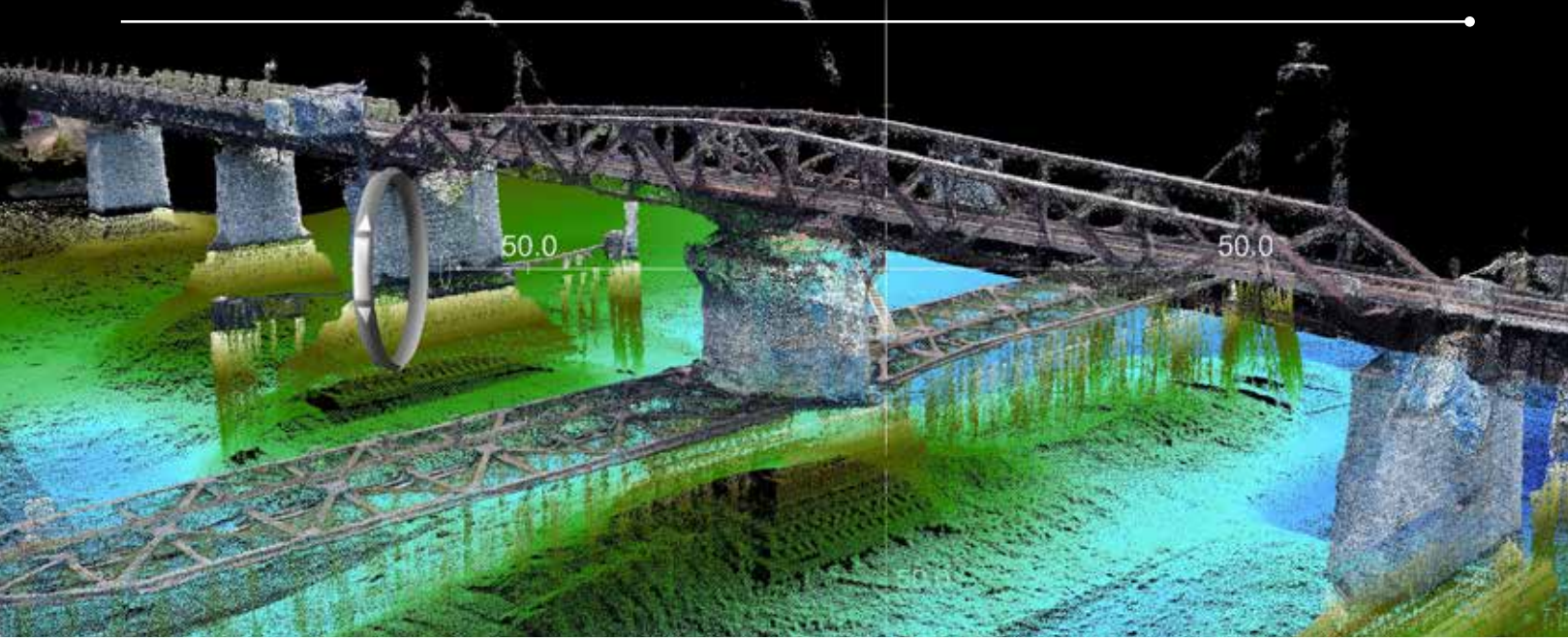
Dig deeper into Brennan's iBOSS™



Aziz Ahmed
CHA Consulting, Inc.

Brennan was very professional from scope development through project execution and on-time delivery of the final products. I will use Brennan without any hesitation in the future.

HYDROGRAPHIC SURVEY AND UNDERWATER INSPECTIONS



LEAVE NOTHING TO THE IMAGINATION

When a project's greatest risks are its unknowns, Brennan deploys our nationally certified hydrographers and **advanced survey equipment to create detailed models** of the anticipated work area. Our underwater investigation capabilities surpass other contractors.

AREAS OF EXPERTISE

- » Multibeam and single-beam bathymetric surveys
- » Side-scan sonar
- » Underwater acoustic imaging
- » Dive inspections
- » Photogrammetry
- » Remotely operated vehicles (ROVs)
- » Licensed drone pilots
- » Unmanned Aerial Vehicles (UAVs)



Staci Goetz
Ramboll, Inc.

The survey and report were delivered under a tight timeframe and on budget, meeting our client's objectives. Brennan is a reliable project partner.

DIVE INSPECTIONS

With **100+ ADCI-certified divers on staff**, we conduct a thorough assessment of your structure, identify areas of interest, and produce a detailed report that can be used for further analysis.



CLIMATE CHANGE RESILIENCE



No roads,
no problem!
See our amphibious
equipment in action.



Communities throughout the country are adapting to extreme weather conditions due to climate change. At Brennan, we construct **sustainable, natural, and structural coastal resiliency** and restoration solutions.

AREAS OF EXPERTISE

- » Barrier islands
- » Beach renourishment
- » Breakwater tubes
- » Canals
- » Coastal wetlands
- » Erosion protection
- » Estuaries
- » Seawalls
- » Surge barriers



Stephen McCandless
Town of Charlestown
Rhode Island

Brennan's work process, thoroughness and attention to detail is second to none. All of the employees and individuals on-site working on the project were very knowledgeable, polite, and respectful to the town and visitors to the area.





WETLAND AND HABITAT RESTORATION

Our team has the proficiency and specialized equipment to tackle **large-scale restoration** projects while **minimizing the impact** on critical aquatic ecosystems. In the last 40+ years, we have restored hundreds of acres of wetland habitat, in fresh and saltwater conditions.

AREAS OF EXPERTISE

- » Beneficial reuse of dredged material
- » Habitat rehabilitation
- » Invasive species removal
- » Island-building
- » Wetland restoration



See our habitat restoration capabilities in action!





MARINE AND REMEDIAL CONSTRUCTION

We've worked in marine construction since 1919. As a specialized contractor, we **provide both above- and below-water construction services**. Our experience includes demolishing degraded structures, preserving and restoring critical infrastructure, and constructing robust barrier walls, containment structures, and cofferdams.

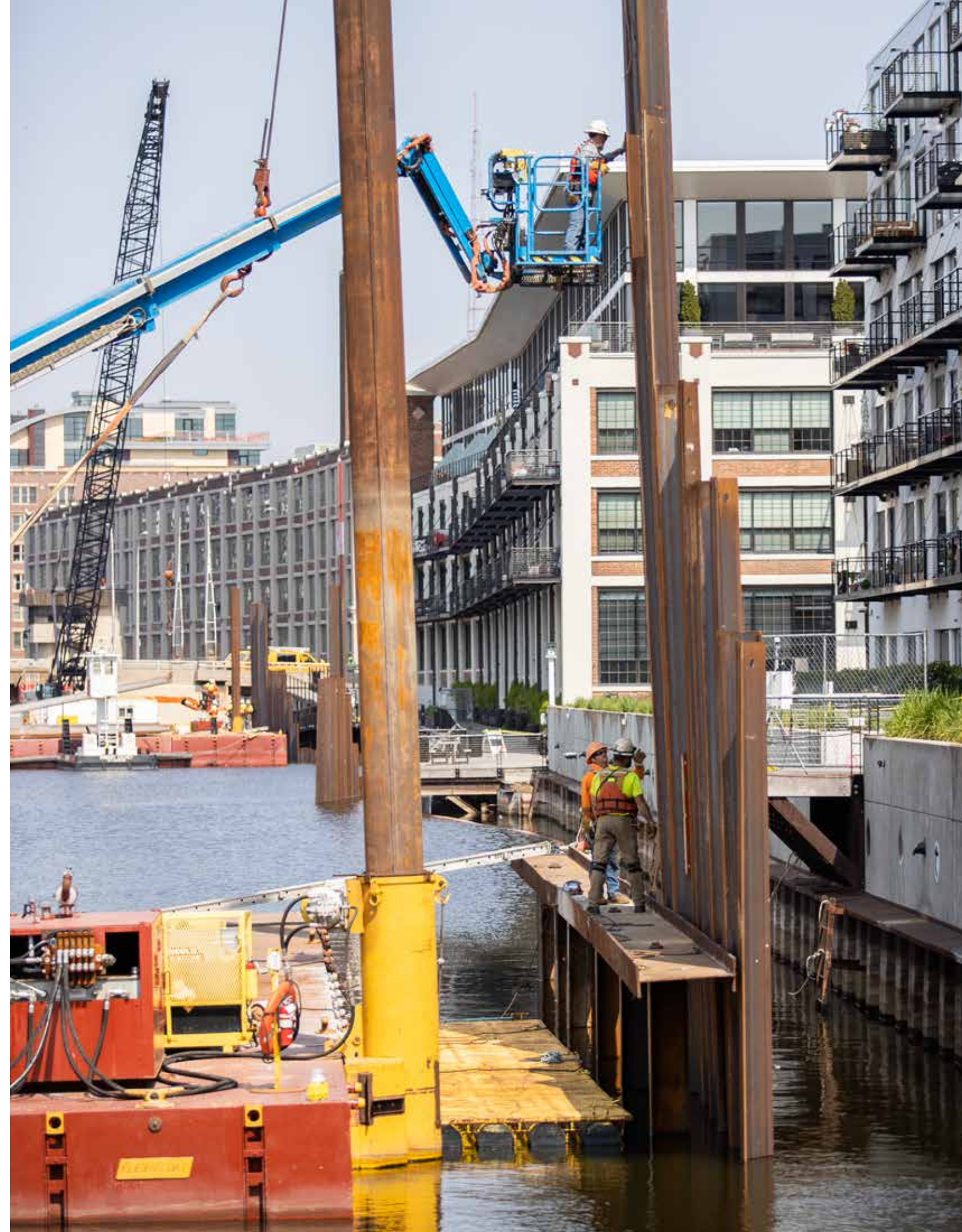
OUR CONSTRUCTION AREAS OF EXPERTISE

- » Barrier walls
- » Bridge pier inspection and repairs
- » Concrete installation and repair
- » Commercial diving
- » Containment cells
- » Demolition
- » Geotechnical support
- » Grouting
- » Maritime security barriers
- » Pile-driving
- » Salvage and large debris removal
- » Temporary and permanent cofferdams
- » Underwater construction and inspection

Brennan continues to be a model for the type of company we want to partner with for virtually any project!

”

Todd Lyden
Hunt Electric Corporation





OUR VISION

We will be the best at delivering innovative solutions to the world's most demanding environmental and infrastructure challenges.

We will continuously develop unparalleled intellectual capital, redefining what is possible while setting the industry standard for safe and ethical practices. Our work will make Brennan the most respected company in our markets.



OUR MISSION

We create and execute innovative solutions to the world's most complex maritime, environmental, and infrastructure challenges.



Stay in the loop with project updates, videos, and current events at Brennan.

